

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/058495 A1

(51) International Patent Classification⁷: B01J 35/04,
23/46, 23/58, 23/63, C01B 3/00

Tsurumichuo 2-chome, Tsurumi-ku, Yokohama-shi, Kanagawa 2308601 (JP).

(21) International Application Number:
PCT/JP2004/018691

(74) Agents: OKABE, Masao et al.; No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo 1000005 (JP).

(22) International Filing Date: 8 December 2004 (08.12.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English



(30) Priority Data:
2003-421138 18 December 2003 (18.12.2003) JP
2003-421139 18 December 2003 (18.12.2003) JP
2004-278759 27 September 2004 (27.09.2004) JP
2004-278760 27 September 2004 (27.09.2004) JP

(71) Applicant (for all designated States except US): CHIYODA CORPORATION [JP/JP]; 12-1, Tsurumichuo 2-chome, Tsurumi-ku, Yokohama-shi, Kanagawa 2308601 (JP).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/058495 A1

(54) Title: CATALYST FOR MANUFACTURING SYNTHESIS GAS AND METHOD OF MANUFACTURING SYNTHESIS GAS USING THE SAME

(57) Abstract: A catalyst for manufacturing synthesis gas has a carrier and a Group VIII metal carried by the carrier. The carrier contains a first ingredient, a second ingredient and a third ingredient. The first ingredient is an oxide of at least an alkaline earth metal selected from the group of magnesium, calcium, strontium and barium. The second ingredient is an oxide of at least an element selected from the group of scandium, yttrium and lanthanoids. The third ingredient is zirconia or a substance containing zirconia as principal ingredient and has a solid electrolytic property. The carrier may be formed by forming an overcoat film on a substrate by coating. Then, the overcoat film contains the above three ingredients. A catalyst according to the invention can remarkably reduce the dimensions of the reaction facility and improve the energy efficiency of the facility.